



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,262	10/26/2000	Dirk Daecke	P00,1843	3837

7590 09/11/2006

SCHIFF, HARDIN & WAITE
Patent Department
6600 Sears Tower- 233 South Wacker Drive
Chicago, IL 60606

EXAMINER

ELALLAM, AHMED

ART UNIT	PAPER NUMBER
----------	--------------

2616

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

57

Office Action Summary	Application No. 09/697,262	Applicant(s) DAECKE ET AL.	
	Examiner AHMED ELALLAM	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 5/26/2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Claims 1-14, 16, 22 and 23 are pending.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bartholomew et al, US (6,400,708).

Regarding claim 1, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

Bartholomew further discloses with reference to figures 1-3, a circuit arrangement (Fig. 2) comprising the channel bank 31, the channel bank comprising Multiplexer/Demultiplexer 75, see figure 2, (claimed transmission unit for inserting data) for inserting voice from telephone 29 (claimed equipment for voice) and data from computer 25 (claimed equipment for data) to be carried over the synchronous T1 **Frame**, data from the two B channels are mapped into respective two DS0 of the T1 frame, and the combined D and EOC (embedded operations control) into another DS0 channel. The voice and data are transmitted using TDM (Time division Multiplexing). see column 1, lines 39-49, and column 9, lines 3-20, see column 11, lines 63-67, column 12, lines 1-19, lines 60-67 and column 13, lines 1-31 , Therefore, the T1 frame reads on the claimed **common frame having a frame length**, inputting data and voice into the timeslots (DS0) of the T1 frame reads on the claimed **inserting data belonging to at least two terminal equipment types or services that are capable of including both voice and data in a common frame having a frame length**, data and voice been inserted in synchronous T1 frame reads on the claimed **insertion mechanism for inserting said data of the at least two terminal equipment types, said data of all terminal equipment types being synchronously inserted into said common frame.**

The combined D and EOC into a different DS0 reads on the claimed **common control channel for operational control**.

Regarding claim 2, with reference to figures 1-3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising:

channel bank 31 for dividing a data stream transmitted in a T1 frame by a multiplexer/demultiplexer 75 (Fig. 2) to a terminal equipments (telephone 29 and Computer 25), (claimed a reception unit for dividing a data stream transmitted in a frame, the frame comprising data belonging to at least two terminal equipment types or services that are capable of including both voice and data, by a transmitter to at least one terminal equipment of the at least two equipment types), (the transmitter is inherent to Bartholomew because it is required for transmitting voice and data to the telephone 29 and computer 25), the Multiplexer/Demultiplexer 75 (the Multiplexer/Demultiplexer also corresponds claimed switch module because it provides the same functionality of the claimed switch module) for demultiplexing the data stream received to its destined terminal equipment (29, 25), wherein EOC (embedded operations channel) is used for control (claimed control data) carried over a DS0, the DS carrying the EOC is different than the DS0(s) allocated for data), wherein the EOC is embedded in a DS0 of the T1 frame; see column 9, lines 3-20, column 11, lines 63-67; column 12, lines 1-19, lines 60-67 and column 13, lines 1-31. (Claimed a switch module for a purpose-conforming division of data stream transmitted in the frame, in which a further division onto further terminal equipment types or services is undertaken based on control data).

Regarding claim 3, Bartholomew discloses a circuit arrangement (Fig. 2) comprising a transmission reception as indicated in claim 1 and reception unit as indicated in claim 2.

Regarding claims 4 and 16, with reference to figures 1-3, Bartholomew discloses a method in a circuit arrangement (Fig. 2) for ("synchronously" as in claim 16) transmitting a data stream in a common frame belonging to at least two terminal equipment types or services that are capable of including both voice and data, comprising:

channel bank 31 (claimed first unit) for inserting data belonging to terminal equipment 29 and 25, the channel bank comprising a Multiplexer/Demultiplexer 75 for inserting data of the terminal equipments (telephone 29 and computer 25) into respective DS0 slots, DS0 slots for transport over a **T1 frame** (T1 frame is a synchronous frame) to a channel bank 39, (claimed second unit) see column 12, lines 60-67 and column 13, lines 1-31, Bartholomew further discloses concurrent ISDN voice and data being mapped into respective DS0 slots, see column 1, lines 39-49, and column 9, lines 3-20, wherein EOC (embedded operations channel) which is used for control (claimed common channel for operational control) is carried over a DS0 other than the DS0 for data, (T1 frame is a TDM frame as indicated by its nature of carrying multiplexed time slots); see column 11, lines 63-67; column 12, lines 1-19, lines 60-67 and column 13, lines 1-31. Bartholomew shows another channel bank (35 as in figure 1, and 39 as in figure 2) (claimed second unit) connected the first channel bank over the T1 line, see figure 1. (Claimed synchronously inserting data of at least two terminal

Art Unit: 2616

equipment types or services into the frame in a first unit, and transmitting the data to a second unit with a time-division multiplex method);

wherein the channel bank 39 (second unit) has a Multiplexer/demultiplexer 81 for dividing data stream (T1) to terminal devices of terminal equipments 3, 7 (Figure 1).

(Claimed dividing data stream in said common frame to terminal devices of at least one terminal equipment type in the second unit).

Regarding claim 5 and 6, Bartholomew discloses using ISDN (Integrated Services Digital Network) in which combined D, and EOC (embedded operations channel) channel are translated into a DS0 slot of the synchronous T1 frame, the 2B and D channels corresponding to one subscriber's ISDN service (2B +D channels). See column 9, lines 3-20, column 10, lines 48-56, column 14, lines 16-31, column 15, lines 59-67 and column 16, lines 1-12. (Examiner interpreted the eoc for control of both the 2B channel and part of D channel as being the claimed depositing data for operational control of connections to which at least two terminal equipment types or services that are capable of including both voice and data are connected in a single operating eoc channel of the frame as in claim 5 and connections are ISDN connections as in claim 6).

Regarding claim 7, Bartholomew discloses with reference to figure 1, that a customer at premises CP-3 can use two DS0 for fractional T1 access for data services over the T1 frame, see column 10, lines 9-23. (Examiner interpreted the two DS0 for data transport as the claimed filling a payload data region available in the frame in a terminal equipment-specific manner depending on a transmission rate of a transmission link).

Regarding claim 8, with reference to figure 1, Bartholomew shows a plurality of terminal equipments 13, 17, 19, 25 connected to the channel bank 31. (Claimed connecting a plurality of terminal equipment of at least one terminal type to a transmission-reception unit).

Regarding claim 9, as discussed above with reference to claim 4, Bartholomew disclose the frame being a T1 frame that comprises 24 DS0 slots, part of the DS0 comprises EOC bits for operational control, while two other DS0 comprises data only. (Examiner interpreted the two B channel comprising data only as the claimed payload data region, and the part of the DS0 having the EOC as the claimed arranging bits for operational control). (Claimed providing bits for operational control in the data belonging to the terminal equipment types, and arranging the bits outside of payload data region provided for the terminal types).

Regarding claim 10, Bartholomew discloses having part of the DS0 comprises EOC bits for operational control for respective two B channels. (Examiner interpreted the part of the DS0 comprising EOC bits as the claimed bits for operational control are arranged in an overhead of the frame).

Regarding claim 11, Bartholomew discloses part of the DS0 comprises EOC bits for operational control for respective two B channels, having the part of the DS0 for EOC bits for both two B channel is interpreted as the claimed addressing said bits for operational control via a sub-address in a message format of the operating channel, because some bits of the EOC are one for one B channel of the two B channel while the other bits of the EOC are related to the other B channel of the two B channel).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12, 13, 14, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartholomew in view of Chaplic et al, US 2004/014068. Hereinafter referred to as Chaplic .

Regarding claim 12, Bartholomew discloses mapping a plurality of ISDN connections at the channel bank 31 into respective DS0 slots of the synchronous T1 frame, but does not specify that the frame is a symmetric digital subscriber line frame.

Regarding claim 13. Bartholomew discloses substantially all the limitations of base claim 4, in addition it discloses the T1 frame for carrying traditional telephony connections, see figure 1, units 29 and 17, but it does not disclose that the frame is symmetric digital subscriber line frame.

Regarding claim 14, the channel bank 35 (second unit) of Bartholomew can be regarded as a network termination unit, and the first unit as a network node. In addition Bartholomew discloses using a synchronous T1 frame (using the T1 line) for carrying voice and data(as indicated above with reference to claim 4), Bartholomew doesn't specify the T1 frame can be an SDSL frame.

Regarding claim 22, Bartholomew discloses all the limitations of base claim 1 as indicated above, but doesn't specify the T1 frame can be an SDSL frame.

Regarding claim 23, Bartholomew discloses mapping a plurality of ISDN connections at the channel bank 31 into respective DS0 slots of the synchronous T1 frame, but does not specify that the frame is a symmetric digital subscriber line frame.

As to claims 12, 13, 14, 22 and 23:

Chaplic discloses that SDSL is used mainly as replacement of T1 network connections. See Chaplic paragraph [0005].

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made to replace the T1 of Bartholomew with the SDSL as indicated by Chaplic because the SDSL is cost effective. It is also advantageous to use SDSL because it requires only one copper wire-pair instead of two copper wire-pairs as required for the T1 services, the benefit would be the ability to implement SDSL using both wire-pairs resulting in increase of bandwidth capacity in Bartholomew.

Response to Arguments

4. Applicant's arguments with respect to claims 1-14, 16-20, 22-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

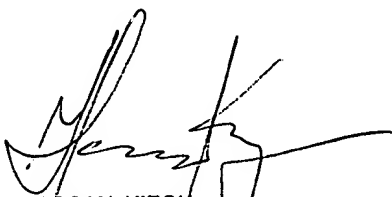
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, To Doris can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHMED ELALLAM
Examiner
Art Unit 2616
8/26/2006



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600